

# xDAS Ambient®

## PORTABLE STRUCTURAL HEALTH MONITORING (SHM) SYSTEM

### PORTABLE SHM SYSTEM

## Carry • Deploy • Analyze — quick and easy on-site!

Battery-powered AVM kit; digitize at the sensor with GPS/DigiSync®; mesh or CAT5 for clean, synchronized field data and auto-PDF reporting.

### What is xDas Ambient

- Portable SHM platform for Ambient Vibration Measurements (AVM)
- Battery-operated units for rapid field campaigns (hours to days)
- Voyager® on portable xPlover for acquisition, storage, and access
- xWave-Ambient digital accelerometers; optional xNet-Ambient extenders
- Automated PDF for quick initial results on laptop/tablet/phone.

### Why the xDas Ambient

- Noise-free by design: fully digital (no induced cable noise)
- Precise timing: sub-ms alignment for consistent OMA datasets
- Simple field handling: one-push start/stop; easy maintenance
- Up to 24 h autonomy; quick on-site charging
- Works your way: wireless or low-cost CAT5; easy data access.

### xDas Ambient Applications

- Quick health estimation after significant events
- Regular inspection and periodic surveys
- Ground, piling, blast and demolition vibration monitoring
- AVM/OMA campaigns for research and commissioning
- Bridges, buildings, dams, tunnels, levees, pipelines, plants, and special structures.

### System Snapshot

**xDAS Ambient®** is Digitex Systems' **portable** SHM solution for rapid AVM campaigns. It measures vibrations around the structure and transmits live data over the local wireless network (or CAT5) to your PC/tablet/phone. **Voyager®** runs on a portable **xPlover** unit, coordinating one or more **xWave-Ambient** battery-operated digital accelerometers—and optional xNet-Ambient MESH extenders—so teams can **start/stop with one push**, capture synchronized measurements, and auto-generate PDF results on site. The **energy-efficient design** enables **up to 24 h** continuous operation with **quick on-site charging**, supports a **large number of measurement points**, and provides options to **extend wireless coverage** in harsh, noisy environments; a clean, fully digital signal path ensures noise-free cabling and reliable datasets for OMA.



### Outcome

- Prove compliance with auditable histories and summary PDFs
- Protect people & assets via reliable thresholds and alarms
- Faster decisions with live dashboards and shareable reports
- Lower site time and cost thanks to portable kits and auto-reports
- Consistent datasets for trend analysis and OMA comparisons.

### Your workflow with Digitex

- **Instrument** - mount/level portable sensors; auto-discover in Voyager®
- **Acquire** - real-time streaming or local logging; sub-ms time sync
- **Analyze** - OMA (FDD/EFDD/SSI/FSDD), spectra, automated PDF
- **Act** - thresholds/alerts, automatic PDF; share with stakeholders.

# PORTABLE SYSTEM OVERVIEW

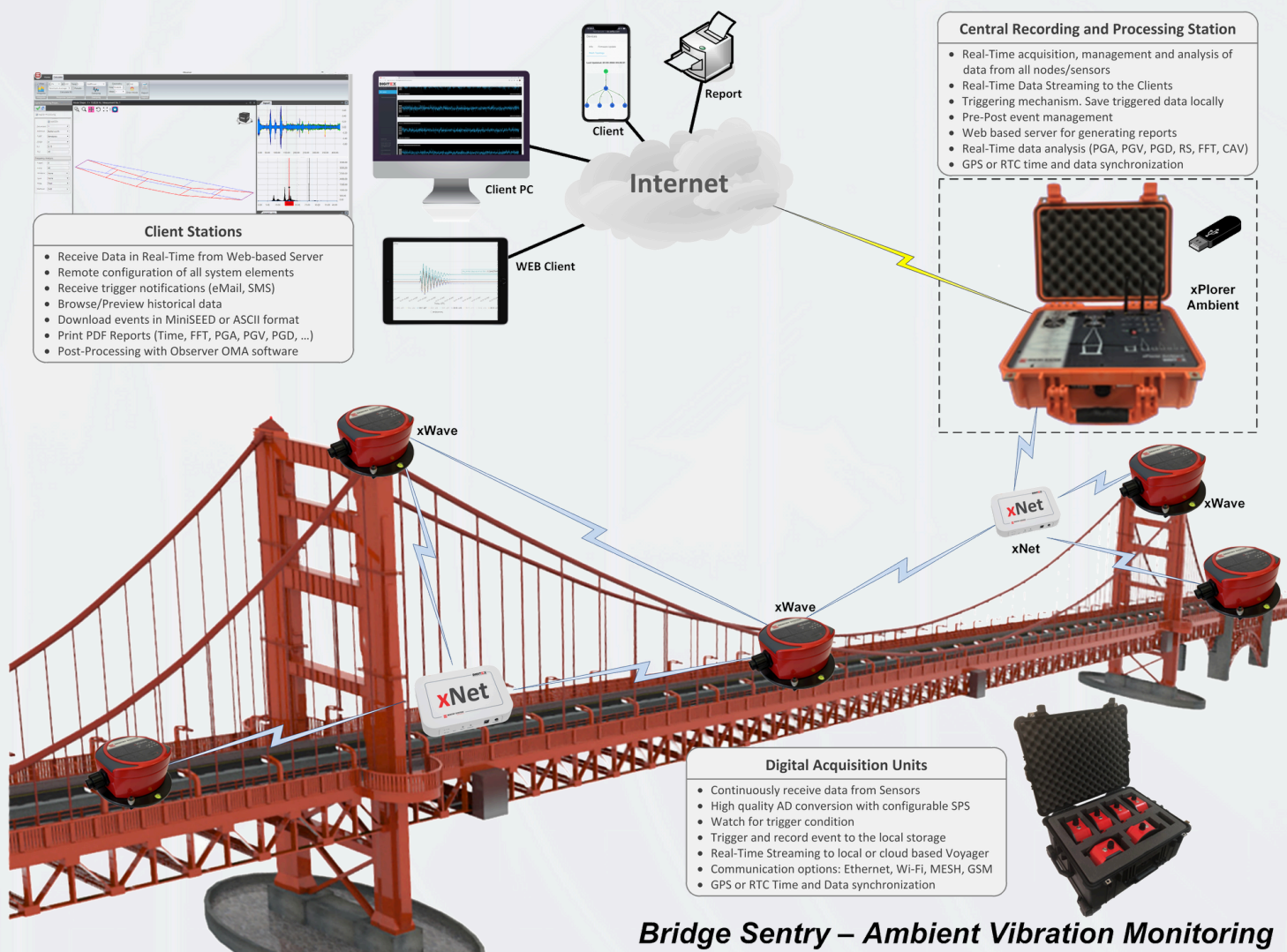
xDAS Ambient is Digitex Systems' portable SHM solution for Ambient Vibration Measurements (AVM). It combines battery-powered xWave® units with a portable xPlorer® running Voyager® to deliver synchronized, low-noise acceleration data, real-time viewing, automated PDF reports, and alerts—all deployable in hours for short-term surveys or rapid condition checks. Wireless links (or low-cost CAT5) and one-button field operation make it ideal for quick mobilization after events, construction impacts, or routine inspections.

The system streams data live to client stations (PC/tablet/phone), with up to ~24 h battery life per node, Ring Buffer + Store&Forward® continuity, and easy data export for OMA/FFT/PSD analysis. Weather-resistant enclosures and optional wireless coverage extension keep campaigns reliable in tough outdoor environments.

Measurements are fully digital, avoiding noise issues common with analog cabling. Units communicate via Ethernet, Wi-Fi, or DigiMESH®, enabling flexible setup in complex environments. The system is designed for autonomy, with rechargeable batteries powering all devices.

## PORTABLE SYSTEM MEMBERS

The Portable Sentry System is a battery-powered SHM kit that rapidly deploys in the field, forms its own wireless mesh, and delivers ready-to-analyze results with minimal setup. Portable Sentry System family of products consists of several units: **xPlorer Ambient**, a portable central recording and processing unit; **xWave Ambient**, a digital accelerometer unit; **xNet Ambient**, a wireless MESH network extender; and the **Carry Box**, a portable equipment transition solution.



## ABOUT DIGITEX

Digitex is a company specialized in design and development of real structural health monitoring systems for a variety of industries and applications including: bridges, tall buildings, campuses, windmills, oil rigs and more. Digitex's innovative solution for ambient vibration measurements and quick health assessment of structures is jointly developed and validated with our partners and advisors from the Universities. When properly configured, the Digitex system is capable of measuring and responding to both natural and man-made events such as: earthquakes, wind, explosions and accidental heavy impacts.